

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID MICHAEL KOELLE,
JEFFREY PHILLIP SNOVER,
AND BRIAN JAMES TARBOX

Appeal 2007-1341
Application 09/894,065¹
Technology Center 2100

Decided: September 6, 2007

Before JOSEPH F. RUGGIERO, ALLEN R. MACDONALD,
and SCOTT R. BOALICK, *Administrative Patent Judges*.

BOALICK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1, 3-10, 12-14, 16-21, and 23-31, all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Application filed June 28, 2001. The real party in interest is International Business Machines Corporation.

STATEMENT OF THE CASE

Appellants' invention relates to the grouping of devices based on attributes in a data processing system. (Specification 1:7-13; Abstract.) In the words of the Appellants:

The present invention provides a method, apparatus, and computer implemented instructions for allowing flexible extensions to a grouping process. The mechanism of the present invention allows defining meta-data, which describes which attribute may be searched and which attributes may be returned. . . .

The mechanism of the present invention allows the dynamic addition of new attributes. With this mechanism, new programs may become suppliers of grouping data, which increases the value of both of the new programs and the overall system.

The meta-data in these examples is common to all suppliers of data, making it possible to create new higher order groups by performing operations against multiple groups at a time. For example, a user could obtain a group of all machines that are e-mail servers, and a group of all machines that have a low-bandwidth network connection. The user can then intersect these two groups, and determine the machines that require a connection upgrade before the latest e-mail server software is installed on them. This combines information gathered from an inventory application, which machines are e-mail servers, with information gathered from a network discovery application, which machines have low-bandwidth connections.

. . .

The mechanism of the present invention allows services to “advertise” attributes that may be used to generate groups. This feature allows any type of service, even those that are unknown,

to supply any piece of data as a grouping attribute.
The user of the grouping service can then ask for a group to be created and receive the membership of the group.

(Specification 10:25 to 12:5.)

Claim 1 is exemplary:

1. A method in a data processing system for grouping based on attributes, the method comprising:

maintaining a set of attributes relating to elements in data processing systems, wherein a desired combination of the attributes in a plurality of possible combinations of the attributes is used to create a respective group of elements containing the respective desired combination of the attributes;

upon receipt of a notification that a new attribute can be searched, dynamically updating the set of attributes;

receiving a query from a requestor wherein the query includes criteria;

identifying a first group of devices, the attributes of which match the criteria; and

returning the first group to the requestor.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

McCormack

US 6,295,527 B1

Sep. 25, 2001
(filed Feb. 13, 1998)

Claims 1, 3-10, 12-14, 16-21, and 23-31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by McCormack.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details.

Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).²

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 102(e). The issue turns on whether McCormack discloses each and every limitation of the claims.

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. McCormack describes techniques for selecting and viewing information about groups of devices within a network. (Abstract; col. 1, ll. 6-8.) McCormack teaches a filter mechanism that is coupled

² Except as will be noted in this opinion, Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii).

to a database containing information about network devices.

(Abstract; Fig. 1.) "The database stores a filter metadata table that describes criteria by which the information in the database can be filtered to establish groups of the devices." (Abstract; Figs. 1-3.)

McCormack teaches that "[t]he filter mechanism receives a set of user-entered criteria, selected from among the filter criteria, that define a group of the devices" (Abstract; Figs. 2-3) and that "[t]he database provides a dynamic view of network devices that meet the user-entered criteria" (Abstract; Fig. 3). The mechanisms taught by McCormack "can accommodate different devices as well as changes in existing devices and introduction of new devices." (Abstract.)

2. McCormack teaches that a filter dialog is built based upon values of filter attributes that are stored in a Filter Metadata table. (Col. 4, ll. 62-64.) A query is constructed based on user-selected filters and applied to a database of network device information. (Col. 5, ll. 1-3.) Results of the query are presented to the user in a "view" of a group of selected network devices. (Col. 5, ll. 3-5.) If no value is stored in the Filter Metadata table for a particular attribute, then that attribute may be omitted from the results or "view" of the network presented to the user. (Col 10, ll. 40-44.) McCormack teaches that the form and content of the "view" presented to the user can be changed by selecting different values in a filter dialog or by changing the contents of the Filter Metadata table. (Col. 11, ll. 21-24.) Thus, the filter

- mechanism is able "to flexibly accommodate a variety of changing information." (Col. 11, ll. 24-26.)
3. McCormack teaches that an inventory polling process periodically polls the network, receives information about the network device, and stores values derived from that information in the database. (Col. 11, ll. 4-8.)
 4. McCormack provides an example where two values (i.e., 7300 and 7500) of a "Device Type" are selected by a user from the filter dialog. (Col. 12, ll. 7-8.) "[T]he filter mechanism 126 interprets the user's selection as requesting information about all network devices that are 7300 or 7500 type devices." (Col. 12, ll. 8-11.) McCormack then provides a second example where the same two "Device Type" values (i.e., 7300 and 7500) are selected, and, in addition, two values (i.e., 10.3 and 11.1) of an input/output system version ("IOS Version") also are selected. (Col. 12, ll. 11-13.) "[T]he filter mechanism 126 interprets the selections as requesting information about devices that are type 7300 or 7500 and that run IOS software version 10.3 or version 11.1." (Col. 12, ll. 13-16.)

PRINCIPLES OF LAW

On appeal, all timely filed evidence and properly presented argument is considered by the Board. *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

In the examination of a patent application, the Examiner bears the initial burden of showing a prima facie case of unpatentability. *Id.* at 1472, 223 USPQ at 788. When that burden is met, the burden then shifts to the applicant to rebut. *Id.*; *see also In re Harris*, 409 F.3d 1339, 1343-44, 74 USPQ2d 1951, 1954-55 (Fed. Cir. 2005) (finding rebuttal evidence unpersuasive). If the applicant produces rebuttal evidence of adequate weight, the prima facie case of unpatentability is dissipated. *In re Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thereafter, patentability is determined in view of the entire record. *Id.* However, on appeal to the Board it is an appellant's burden to establish that the Examiner did not sustain the necessary burden and to show that the Examiner erred -- on appeal we will not start with a presumption that the Examiner is wrong.

Anticipation is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1946 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

During examination of patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc) (internal citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention,

i.e., as of the effective filing date of the patent application." *Id.* at 1313, 75 USPQ2d at 1326.

ANALYSIS

Appellants contend that Examiner erred in rejecting claims 1, 3-10, 12-14, 16-21, and 23-31 as being anticipated by McCormack. Reviewing the findings of facts cited above, we do not agree. In particular, we find that the Appellants have not shown that the Examiner failed to make a prima facie showing of anticipation with respect to claims 1, 3-10, 12-14, 16-21, and 23-31. Appellants failed to meet the burden of overcoming that prima facie showing.

In addition, as will be discussed, we find (1) that claims 14, 16-20, and 30 fail to meet the requirements of 35 U.S.C. § 112, second paragraph, and (2) that claims 21, 23-27, and 31 fail to meet the requirements of 35 U.S.C. § 101. Therefore, we enter new grounds of rejection pursuant to our authority under 37 C.F.R. § 41.50(b).

Regarding claim 1, Appellants argue that McCormack does not disclose or suggest the recited limitation of "upon receipt of a notification that a new attribute can be searched, dynamically updating the set of attributes." (Br. 11-13; Reply Br. 2-3.) We do not agree.

The Examiner found that McCormack teaches this limitation by teaching polling of the network for changes in network device attributes and searching on device attributes. (Answer 4; FF 2-3.) The Examiner found that a change in the value of a previous attribute, as detected during the polling process, can be interpreted as a "new attribute." (Answer 4, 6-11.) Appellants argue that McCormack does not disclose receiving or adding a

new attribute because the receipt of a new value of an existing attribute, as disclosed by McCormack, cannot meet the "new attribute" limitation as claimed. (Br. 11-13; Reply Br. 2-3.) In other words, Appellants argue that the claimed "new attribute" must be a new attribute category, not just a new value of an attribute. (Br. 11-13; Reply Br. 2-3.) We do not agree.

The plain language of claim 1 merely requires receipt of notification that a new attribute can be searched, and upon receipt of such notification the set of attributes is dynamically updated. Nothing in the claim language requires the "new attribute" to be a new category of attribute -- i.e., an attribute category that was not previously a member of the set of attributes. When a new attribute value is detected in the polling process, this serves as receipt of a notification that the new attribute value can be searched, and the set of attributes is dynamically updated. Appellants propose an alternative construction of claim 1, but they have not demonstrated why the Examiner's construction is inconsistent with the Specification or otherwise unreasonable. Thus, we find that the Examiner's construction of claim 1 is reasonable.

In addition, the Examiner found that even if the claim term "new attribute" requires a new attribute category rather than a new attribute value, McCormack nevertheless discloses a new attribute category in the example where a second attribute is added to a search attribute after conducting a search using only a first attribute. (Answer 10; FF 4.) We agree. Also, we note that McCormack teaches that an attribute having no value is not displayed to the user. (FF 2.) If such an attribute subsequently was updated to have a value, then the attribute would then be displayed to the user for the first time and could be considered a new attribute category.

Appellants also argue that there is no teaching, suggestion, or incentive to modify McCormack in order to meet the invention as claimed and that the only way to modify McCormack in order to meet the claimed invention is through the use of improper hindsight. (Br. 13.) This argument is inapposite because the rejection at issue is one of anticipation under 35 U.S.C. § 102, not obviousness under 35 U.S.C. § 103. No modification of McCormack is necessary -- indeed, no modification of McCormack is permitted -- in order to anticipate claim 1.

Accordingly, we conclude that the Examiner did not err in rejecting claim 1 under 35 U.S.C. § 102(e).

Claims 3-10, 12-14, 16-21, and 23-31 were not argued separately, and stand or fall together with claim 1.³

NEW GROUNDS OF REJECTION UNDER 37 C.F.R. § 41.50(b)

We make the following new grounds of rejection using our authority under 37 C.F.R. § 41.50(b).

35 U.S.C. § 112, Second Paragraph

Claims 14, 16-20, and 30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

³ As discussed in the new ground of rejection under 35 U.S.C. § 112, second paragraph, claim 14 does not recite any structure for performing two of its recited claim limitations. For the purpose of this appeal, we will treat independent claim 14 and dependent claims 16-20 and 30 as having recited the appropriate structure, e.g., a "maintaining means for maintaining a set of attributes . . ." and a "dynamically updating means for, upon receipt . . . dynamically updating the set of attributes."

Claim 14 recites a data processing system comprising, among other things, "maintaining a set of attributes relating to elements in data processing systems, wherein a desired combination of the attributes in a plurality of possible combinations of the attributes is used to create a respective group of elements containing the respective desired combination of the attributes" and "upon receipt of a notification that a new attribute can be searched, dynamically updating the set of attributes." However, there is no corresponding structure recited to perform either of these two quoted claim limitations.

Claims 16-20 and 30 each depend from claim 14 and are rejected under 35 U.S.C. § 112, second paragraph, for the same reasons discussed with respect to claim 14.

35 U.S.C. § 101

Claims 21, 23-27, and 31 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claim 21 recites a "computer program product in a computer readable medium" comprising "first instructions . . .," "second instructions . . .," "third instructions . . .," and "fourth instructions" Appellants have admitted that "[t]he subject matter of claim 21 is directed to a computer program that performs the method of claim 1 (not specifically shown, *page 20, line 18 through page 21, line 4*). This claim is a computer program version of independent claim 1." (Br. 9 (emphasis added).) The Specification, from page 20, line 18 through page 21, line 4, states that:

the present invention applies equally regardless of the particular type of signal bearing media actually used to carry out the distribution. *Examples of*

computer readable media include recordable-type media, such as a floppy disk, a hard disk drive, a RAM, CD-ROMs, DVD-ROMs, and transmission-type media, such as digital and analog communications links, wired or wireless communications links using transmission forms, such as, for example, radio frequency and light wave transmissions. The computer readable media may take the form of coded formats that are decoded for actual use in a particular data processing system.

The description of the present invention has been presented for purposes of illustration and description, and is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art.

(Specification 20:18 to 21:4 (emphasis added).)

Thus, the "computer readable medium" of claim 21 includes electromagnetic radiation, i.e., signals. This in turn includes "carrier waves" or "propagated signals" which are not statutory subject matter. Claims that are broad enough to include nonstatutory subject matter (intangible signals) as well as statutory subject matter (tangible manufactures) are considered to be unpatentable because applicant may always amend to limit the claims to what is statutory. *See Ex parte Lundgren*, 76 USPQ2d 1385, 1417-24 (BPAI 2005) (Barrett, concurring-in-part and dissenting-in-part). A case involving the issue of whether intangible signals are patentable is presently on appeal to the Federal Circuit: *In re Nuijten*, No. 06-1301.

A man-made signal represents coded information. A signal can be an abstract quantity describing the information (numbers) or a measurable physical quantity (e.g., the fluctuations of an electrical quantity, such as

voltage) containing information. *See In re Walter*, 618 F.2d 758, 770, 205 USPQ 397, 409 (CCPA 1980) ("The 'signals' processed by the inventions of claims 10-12 may represent either physical quantities or abstract quantities; the claims do not require one or the other"). Here we interpret the "computer readable medium" of claim 21 to include a time varying electromagnetic radiation signal instead of just an abstract quantity, such as a data format.

The "computer readable medium" of claim 21 is considered to be nonstatutory subject matter because a "carrier wave" or a "propagated signal" does not fall within one of the four statutory categories of subject matter under 35 U.S.C. § 101.

The categories of statutory subject matter are "process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. "[N]o patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U.S.C. § 101." *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483, 181 USPQ 673, 679 (1974).

A "process" is a series of acts and, since claim 21 does not recite acts, it is not a process. Compare the method for grouping based on attributes in claims 1, 3-8, and 28, which are not rejected under 35 U.S.C. § 101.

The three product classes of machine, manufacture, and composition of matter have traditionally required physical structure or substance. "The term machine includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." *Corning v. Burden*, 56 U.S. 252, 267 (1854); *see*

also Burr v. Duryee, 68 U.S. 531, 570 (1863) (a machine is a concrete thing, consisting of parts or of certain devices and combinations of devices).

Machines do not have to have moving parts. In modern parlance, electrical circuits and devices, such as computers, are referred to as machines. The intangible "carrier wave" or a "propagated signal" embodiment of claim 21 has no concrete tangible physical structure, and does not itself perform any functions. Therefore, as such, an intangible does not fit within the definition of a "machine."

A "manufacture" and a "composition of matter" are defined in *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980):

[T]his Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931). Similarly, "composition of matter" has been construed consistent with common usage to include "all compositions of two or more substances and ... all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280 (D.C. 1957) (citing 1 A. Deller, *Walker on Patents* § 14, p. 55 (1st ed. 1937). [Parallel citations omitted.]

The intangible embodiment of claim 21 is not composed of matter and is clearly not a "composition of matter."

A "manufacture" is the residual category for products. 1 Chisum, *Patents* § 1.02[3] (2004) (citing W. Robinson, *The Law of Patents for Useful Inventions* 270 (1890)). If a signal falls within any category of § 101, it must fall within this category. The definition of "manufacture" from *Diamond v. Chakrabarty* requires a tangible article prepared from materials. "Tangible" refers to something that is discernible by touch. The other cases dealing with manufactures also require a tangible physical article. The CCPA held in *In re Hruby*, 373 F.2d 997, 153 USPQ 61 (CCPA 1967) that there was no distinction between the meaning of "manufacture" in § 101 and "article of manufacture" in § 171 for designs. The issue in *Hruby* was whether that portion of a water fountain which is composed entirely of water in motion was an article of manufacture. The CCPA relied on the analysis of the term "manufacture" in *Riter-Conley Mfg. Co. v. Aiken*, 203 F. 699 (3d Cir.), a case involving a utility patent. The CCPA stated in *Hruby*: "The gist of it is, as one can determine from dictionaries, that a manufacture is anything made 'by the hands of man' from raw materials, whether literally by hand or by machinery or by art." 373 F.2d at 1000, 153 USPQ at 65. The CCPA held that the fountain was made of the only substance fountains can be made of--water--and determined that designs for water fountains were statutory. Articles of manufacture in designs manifestly require physical matter to provide substance for embodiment of the design. Since an "article of manufacture" under § 171 has the same meaning as a "manufacture" under § 101, it is inevitable that a manufacture under § 101 requires physical matter.

Some further indirect evidence that Congress intended to limit patentable subject matter to physical things and steps is found in 35 U.S.C.

§ 112, sixth paragraph, which states that an element in a claim for a combination may be expressed as a "means or step" for performing a function and will be construed to cover the corresponding "structure, material, or acts described in the specification and equivalents thereof." "Structure" and "material" indicate tangible things made of matter, not energy.

As discussed above, claim 21 includes an intangible embodiment that does not have any tangible physical structure or substance and does not fit the definition of a "manufacture" which requires a tangible object.

Our conclusion that a "signal" does not fit within any of the four categories of § 101 is consistent with *In re Bonczyk*, 10 Fed. Appx. 908 (Fed. Cir. 2001) (unpublished) ("fabricated energy structure" does not correspond to any statutory category of subject matter and it is unnecessary to reach the alternate ground of affirmance that the subject matter lacks practical utility) and with the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, 1300 Off. Gaz. Patent and Trademark Off. (O.G.) 142, 152 (Nov. 22, 2005), in the section entitled "Electro-Magnetic Signals."

Claims 23-27 and 31, each of which depends from claim 21, are thus also directed to an intangible embodiment. These claims are rejected under 35 U.S.C. § 101 for the same reasons discussed with respect to claim 21.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)).

37 C.F.R. § 41.50(b) provides that, "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellants, *WITHIN TWO MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of proceedings (37 C.F.R. § 1.197 (b)) as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner ...

(2) Request rehearing. Request that the proceeding be reheard under 37 C.F.R. § 41.52 by the Board upon the same record ...

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that:

(1) The Examiner did not err in rejecting claims 1, 3-10, 12-14, 16-21, and 23-31 for anticipation under 35 U.S.C. § 102.

(2) Claims 14, 16-20, and 30 are unpatentable under 35 U.S.C. § 112 because they are indefinite.

(3) Claims 21, 23-27, and 31 are unpatentable under 35 U.S.C. § 101 because they are directed to non-statutory subject matter.

DECISION

The rejection of claims 1, 3-10, 12-14, 16-21, and 23-31 for anticipation under 35 U.S.C. § 102(e) is affirmed.

Claims 14, 16-20, and 30 are rejected as being indefinite under 35 U.S.C. § 112, second paragraph.

Claims 21, 23-27, and 31 are rejected as being directed to non-statutory subject matter under 35 U.S.C. § 101.

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New grounds of rejection have been entered under 37 C.F.R.
§ 41.50(b).

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED
37 C.F.R. § 41.50(b)

KIS

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